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EXTENSION SERVICE  
U. S. DEPARTMENT OF AGRICULTURE✓  
FARM FORESTRY EXTENSIONExtension Subject-Matter Seminar Conference  
March 5, 1946

Reserve

Introduction

In value, timber ranks tenth among all farm crops; hence the annual farm woodland contribution to farm income is significant. These farm woodlands, totaling 139 million acres, or one-third of our commercial timber area, are scattered among three and one-half million farm owners. They occupy one-fifth of the land in farms and in general include much of the best commercial timberland of the country. Then, too, they are relatively close to the markets. This means an advantage in harvesting and marketing the forest products and an opportunity for intensive woodland management, since the tracts are small and accessible for attention when annual field crop work is not pressing. These farm woodlands furnish nearly one-fourth of the sawlog supply of the United States, about one-third of the pulpwood, and the bulk of the fuel wood, fence posts, maple sirup, and similar products for farm use and for sale.

A well-managed farm woodland with a good growing stock of trees can safely produce three times as much as the average untended woods. Farm woodland owners of the United States have a potential, but so far unclaimed, annual revenue, based on normal times, of 500 million dollars to be realized through woodland management, instead of the 150 million dollar revenue now obtained; thus the contribution to the farm income can be materially increased.

Extension Forestry Organization

Farm forestry extension work is authorized by section 5 of the Clarke-McNary Law and by the Norris-Doxey Act. It is administered, according to Memorandum No. 537, May 25, 1925, by the Extension Service of the Department of Agriculture in cooperation with State extension services, and thus is a part of the extension agricultural program of the land-grant colleges. Federal allotments are matched with an equal amount or more of State funds and are used for the employment of State extension foresters who serve as project leaders. The work contemplates both assistance to individual farm owners in various forms of timber growing and educational or extension work in forestry among farm owners by groups. The 44 States and 2 Territories now cooperating with the Department employ 61 extension foresters (some wartime vacancies still exist), who are charged with the responsibility of developing a State-wide farm forestry extension program and of carrying it out among farm people through county agricultural agents. The State farm forestry programs are facilitated in their development and progress by two extension foresters working out of the Washington office. These men provide a general advisory service, assisting with extension methods, techniques, and subject-matter preparation, and serve in a forestry liaison capacity between the Department of Agriculture and State extension foresters. The Forest Service, through its Washington and regional offices, assists with subject matter, program development, and relationships.

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## A. Review of 1945 Work

In 1945 farm woodlands served as never before in supplying critical war materials. In addition to increasing field crops, farmers were asked to cut larger quantities of sawlogs, veneer logs, and pulpwood, and to increase naval stores production, fuel wood, and other products. Wood ranked along with aluminum, copper, and steel as essential war material. Requirements for lumber in 1945 exceeded the  $35\frac{1}{2}$  billion feet consumed the previous year. The estimated requirements for domestic pulpwood were placed at 16 million cords. Farmers responded generously in 1945 to the requests of the War Production Board for more timber products.

### 1. Major Phases of Work

In view of the critical need for forest products, the major item taken up with State extension foresters during 1945 concerned the wartime jobs of farm timber production to meet war requirements. All State extension foresters through production drives, campaigns, and on-the-ground assistance contributed materially to meeting these timber requirements. In addition to harvesting, utilization, and marketing of forest products, forestry extension embraced a number of farm activities relating to woodland management, tree planting, wood preservation, farm building construction, the production of naval stores, maple sirup, wildlife conservation, and farm safety. The Federal extension foresters kept the State extension foresters advised on special wood requirements needed for the conduct of the war, regulations and limitations in connection with production and distribution processes, and cooperated with various agencies in this behalf. Another important task was the rural emergency fire control project, in which the extension foresters were named leaders in more than half of the States. The extension program for the re-conversion period received secondary emphasis.

### 2. Cooperation in Carrying Out the Program

A great deal of cooperative assistance has been obtained from associated agencies in carrying on farm forestry extension the past year. The Forest Service has been extremely helpful in the preparation and distribution of subject matter and in obtaining from WPB the necessary regulations, limitations, and the like, which were urgently required in connection with the production of forest products for the war program.

The Soil Conservation Service, both here and in the field, has aided our program in a number of ways, and this included issuing cooperatively with the Forest Service and Extension Service a leaflet on the "Wartime Harvests From Farm Woodlands."

In the field of rural building construction, the home management people and agricultural engineers assisted in the work, and the latter group also aided materially in the rural emergency fire program.

The Federal extension foresters were members of the War Activities Committee on pulpwood and forest products which enabled them to keep abreast of war requirements. Some work was carried on



with the American Black Walnut Association, not only in gunstock production, but in the development of a 4-H black walnut planting and management activity. Contact with the Southern Pulpwood Conservation Association was of mutual benefit in encouraging pulpwood production as well as obtaining information on markets and requirements for pulpwood material.

Discussions were held with the Fish and Wildlife Service for increased participation in farm wildlife programs. State forestry departments have been very helpful in many instances in making the program successful and in some States contributed toward the salaries of State extension foresters.

Periodical Publishers National Committee cooperated in the development of subject matter, especially news releases, and made available a motion picture film designed to stimulate farm production of pulpwood.

### 3. Services Rendered and Accomplishments

- a. Department to States. As explained, State extension foresters were very active the past years in stimulating the production of forest products from farm woodlands. Typical information supplied the States from the Washington office was that of keeping the State representatives informed on urgent war requirements, such as dogwood for shuttle blocks, black walnut for gunstocks, hickory for handles, pulpwood for paper, lumber for crating and building, veneer logs for airplanes, and fuel wood for heating. Various WPB and OPA regulations and limitations also were distributed as promptly as they were issued to the States, as well as information on goals for forest products, production requirements, and the like. The State extension foresters reported this service as being exceedingly valuable to them.

Early in the war period there was need for black walnut gunstocks. Contact with the War Production Board was made, and the State extension foresters in the 27 walnut-producing States were given information on gunstock requirements, ceiling prices, and other facts. The State men in turn encouraged farmers to harvest their walnut trees, assisting them in obtaining full value for their timber without mutilating the farm woods. Almost all of the gunstock material was obtained from farm woods.

Appearance on farm radio programs when on field trips to the States has been helpful in explaining programs and developments.

Contacts were made with schools of forestry and forestry departments of universities in regard to the need for prospective county agents to receive some forestry training in connection with their agriculture courses or even earn forestry degrees with a minor in agriculture. There was agreement with the



deans and directors of extension that men with this type of training would meet a definite need in counties that are predominantly in woodlands. In some States consideration is being given to the appointment of forestry-trained county agents.

Information on the establishment of community, town, and 4-H county forests as memorials for war veterans was taken up jointly with forest services and State representatives. The States are very receptive to this activity.

A pattern for extension cooperation with State U.S.E.S. officials was developed as a result of conferences in which industry, Federal and State extension agents, and the War Activities Committee took part. This program, providing for employment in woods work, was distributed to State extension agencies and the U.S.E.S. offices in 24 timber-producing States.

In view of wartime shortage of shuttle blocks the possible use of Casuarina, now grown in southern Florida for windbreaks, was investigated. Members of the shuttle-block industry were assisted by the State extension forester with arrangements for getting sample blocks for shuttle testing purposes.

Through arrangements made with directors of extension and extension foresters all the county agents in two States visited the Southern Forest Experiment Station branch station at Crossett, Ark., last year and received practical farm forestry information. Here a 40-acre demonstration has been laid out, cutting practices applied, and cost figures kept which are applicable to farm forest problems.

Labor economies were effected in the States through encouraging the use of labor-saving equipment, such as efficient hand tools (e.g., the Sandvik bow saw), chain and circular power saws, wood-splitting and tree-planting machines, etc. It is expected that much of the farm timber in the future will be harvested through labor-saving equipment. Arrangements were made through the War Activities Committee for State extension foresters of the four New England States to obtain power saws, which were used to demonstrate farm timber harvesting.

Another example is in the field of wood preservation where procedures developed at the Forest Products Laboratory, Madison, and at the Agricultural Research Center were followed closely and sent to the field.

A house organ known as RANDOM FORESTRY NOTES, while issued on a restricted basis during wartime, was helpful as a contact medium among State extension foresters.

- b. States to Department. State extension foresters have always been most helpful in furnishing information and suggestions to the Washington extension office. For example, last year there was need for quickly appraising the fuel situation in certain critical areas. State representatives obtained the necessary



information as well as offered suggestions on fuel prices, and measures necessary to improve conditions, which in turn were assembled and relayed to the proper agency — OPA, civilian requirements of WPB, etc. After the Cape Cod hurricane last year, information was brought to the fuel wood division of WPB that down timber could be salvaged.

The State extension foresters obtained fuel wood production and consumption data which proved helpful to the Forest Service in wartime fuel wood studies.

Further examples are given under the next heading.

- c. Interstate. Exchange of ideas between States is very important to the farm forestry extension program. Although some things that will work in one State are not applicable to another, exchanging ideas is an important service. For example, after the report was made to the States that black walnut timber was urgently needed for gunstocks, the extension foresters in one State arranged black walnut selling pools which were praised by the gunstock industry in spite of the fact that prices to farmers for their standing walnut trees finally were doubled — in one instance reaching \$150 per thousand. The details of this plan found practical use in other States in one way or another. About this same time, in another State, representatives of the Extension Service and the Soil Conservation Service, cooperating with local farm organizations, developed log-selling concentration yards where sawlogs could be sold by auction. Material advances in prices to farmers resulted. It was arranged for the unsold lower-grade logs to be custom sawn and returned to the farm for building construction.

Tree-planting machines developed with the assistance of extension foresters were publicized and arrangements made for neighboring extension foresters to see the machine in action. Details of a wood-splitting machine developed by farmers in one State were distributed, and it is known other States have taken advantage of this information. The method of packaging farm tree-planting stock by the packet system has been explained to various State extension foresters with favorable results. It makes the tree-ordering job easier for the farmer.

The tedious job of digging fence-post holes by hand has prospects of being supplanted by power equipment, using a farm-built attachment for a tractor. Various States are picking up this method, which encourages the use of farm-grown wooden posts rather than the purchase of factory-made steel posts. An extension forester developed a procedure for killing undesirable pasture trees which has proved helpful to the pasture-improvement program, and this has been taken up by other States.

In connection with extension forestry work and farm forest marketing projects, memoranda of understanding with State forestry departments, providing for definite cooperation, have been developed. Some of these are of unusual importance and suggest the advisability of apprising other States. New Hampshire, North Carolina, and Indiana are among those States with outstanding programs.



Extension foresters have led the way in the field of wood preservation on farms. In a Western State the use of pentachlorophenol for treating potato cellar timbers and fence posts has been encouraged with considerable success. Preliminary results were so gratifying that the State legislature provided special research funds to improve practices. In the South increasing numbers of farmers are using steel vats with good results to heat creosote for treating fence posts, the heat being supplied by steam from boilers or local industry.

A few State extension foresters have been active in encouraging greater attention to wildlife on the farm, and these have provided many helpful suggestions for paving the way for those to follow. This activity offers an opportunity for both adults and youth.

County-wide pulpwood production meetings, organized by Extension, sponsored by industry, and assisted by numerous co-operating agencies, have been the means of stepping up production, and the idea is being spread to other States.

#### 4. Publications.

The past year two bulletins were issued cooperatively with the Forest Service and a third cooperatively with the Forest Service and Soil Conservation Service. A number of articles appeared in the Extension Service Review relating to farm forestry extension or the emergency rural fire-control project or the youth conservation program. Several articles appeared in national forestry periodicals. A report dealing with the production and consumption of fuel wood was prepared cooperatively with the Forest Service. Large numbers of bulletins, leaflets, circulars, and other publications were prepared and issued by State extension foresters.

### B. Problems, Plans, and Recommendations

#### 1. Major Problems Requiring Attention in 1946

As only the more important farm forestry problems will be discussed here, the following should not be appraised as the full extension program.

Timber Cutting. As we view farm woodlands in the wake of the war emergency we observe that they have been subjected to heavy cutting and in some cases stripped of their timber values. Although it was necessary to cut heavier during the emergency it is regrettable that many more forest owners were not sufficiently informed on forestry to prevent unnecessary waste. It is believed that ample timber could have been produced without resorting to destructive cutting that depleted the stand and seriously impaired future production. This problem dealing with the application of good cutting practices will have a dominant place in the extension program in 1946. Technical guidance and assistance in selecting trees and in carrying on logging operations will be given. The services of local project foresters where they are available, industrial foresters, and other cooperators will help to expedite this phase of the program.



Woods Fires - Fires continue as a major problem and threaten the value and productiveness of merchantable timber and younger stands. Woods fires, followed by decay and damaging bark beetle infestation, may reduce the stand to the point where planting may be necessary to restore the area to timber production. Of the 131,000,000 acres of forest land in the United States without organized protection, approximately 45 million acres are owned by farmers. Arousing the interest of farmers in protection and the giving of instructions for safeguarding the farmstead and woodland against fire have an important place in the extension program. This activity will be conducted in cooperation with State forestry agencies, their field representatives, and local protection groups.

Marketing - Timber marketing presents many problems to owners who are unfamiliar with estimating and selling procedures. Oftentimes owners do not have the labor or equipment to do their own logging and therefore find it necessary to sell timber on the stump. Under these conditions the owner may need assistance in selecting trees to be sold, in estimating timber, and in getting bids from several buyers to be assured of a fair return. Information on price ceilings, buyers, marketing pools, cooperatives, and other selling procedures will be distributed to farmers. It is highly desirable to keep in close touch with industry about its requirements and to get its active cooperation in timber production and marketing. Farmers will need the assistance of marketing specialists at the college, foresters, county agents, and others who are in a position to aid with marketing of forest products.

Forest Tree Planting - The forest-tree-planting situation briefly is this: State forest nurseries cooperating with the Forest Service under the Clarke-McNary Act, section 4, and the Norris-Doxey Act, distributed to farmers 90,000,000 trees in 1941 and 38,000,000 in 1944. Although distribution of forest planting stock has decreased an average of 50 percent, principally because of the wartime labor shortage, the present demand is still quite sizable. Apparently farmers considered it important even during a war year to reforest idle lands, to control erosion, and to establish windbreaks and shelterbelts. Farmers in the Prairie-Plains States recognize that tree shelterbelts not only protect the farmstead and soil but aid materially in the production of field crops. County agents have a vital interest in reforestation and will continue to assist farmers in getting trees, in demonstrating planting practices, and in caring for young plantations. This work in 1946 should show an increase over 1945 if State nurseries can supply the planting stock.

Lumber and Logs for Farm Building - Owing to the pressure of food production and war restrictions, farm buildings were not adequately maintained. Consequently, lumber is greatly needed for repairs and for new buildings as storage for crops and housing for livestock and equipment. As lumber stocks have reached an all-time low and as many lumber items are not available at local retail yards the farmer finds himself confronted with a serious lumber problem of meeting essential needs. Extension foresters and engineers are called on for information as to how lumber may be procured and for assistance with plans for getting out lumber from home-grown timber. In the timbered sections of the country, extension agents have encouraged



farm lumber production as a means of meeting building needs. This activity, which is attaining greater importance in the extension program, offers splendid opportunities for further development. Cooperation with other specialists and county agents in the holding of building schools is recognized as an effective means of reaching farmers with information on how the farm woods can help meet the building problem and at a substantial savings to the owner.

4-H Forestry - It is likely that farm youth will continue to be busily engaged in food production. Perhaps it will be another year or two before interest in regular 4-H forestry projects will return to a prewar level. However, 4-H Club members can perform an invaluable service in fire protection of the farmstead and woodlands and in forest and soil conservation. Older youth can assist with fuel wood production and perhaps with other wood products as time permits. Instruction in fire protection and woodland management will be continued where interest warrants. The establishment of community and county 4-H forests as war memorials is a newer activity which can be expected to gain momentum as county 4-H groups become aware of the advantages of such forests for recreation and as community centers. Here again county extension agents will rely heavily on the assistance of foresters. The Forest Service and Extension Service are collaborating on this project, and it is believed that worthwhile results will be attained. It should be mentioned that the pulpwood industry in the South is cooperating in the establishment of State 4-H forestry camps. These intensive training camps should be established in several additional States in 1946.

## 2. Procedure for getting the job done

The farmer needs simple, practical forestry information and assistance in order to put his woodlands under a system of management that will assure continuous timber production and a satisfactory income. Reaching  $3\frac{1}{2}$  million woodland owners and aiding them with the application of sound timber management practices are sizable jobs that call for the assistance of all agencies and for organized action on State and county levels. Heavy responsibility rests on extension foresters who attack the problem by working through the 7,000 extension agents, numerous county and community committees, and neighborhood leaders. These extension agents will aid woodland owners through direct assistance, through personal contacts, the press, radio, woods demonstrations, local forestry schools, and other types of meetings. Various kinds of literature will be prepared as needed in addition to releases on current marketing conditions, prices, and timber requirements. Cooperation will be extended to State forestry departments and the Federal Forest Service conducting woodland management projects and forest research projects under the Norris-Doxey Act. Farmers will be encouraged to take advantage of the assistance available through these agencies. In order to serve woodland owners effectively, it is necessary to plan and develop the extension program in the State in cooperation with the State forestry department. Considerable progress has been made in this direction.



### 3. Subject-Matter Specialists Plans for the Year

The problems enumerated above constitute the basic elements of the specialists' plans for 1946. It should be remembered that farm forestry, embracing as it does a crop that requires a period of years to reach merchantability, does not change materially from year to year. For this reason there will be no fundamental changes in the program during the reconversion period, but rather readjustments to new conditions and to a peacetime economy. The principal objective of farm forestry extension will continue to be that of maintaining a system of management for farm woodlands, which will enable them to contribute more fully and regularly to the farm income and to better living on the farm. Some redirection of the program and intensification in spots will be necessary as in the case of reforestation, woods management, farm building, and 4-H forestry, all of which have lagged during the war years. As a part of the regular extension program, there are other important activities that should be emphasized, depending on conditions within the State.

- a. Forestry Training for County Agents - During the war years there was a heavy turn-over of county agents; in fact, some counties changed agents two or more times. Many of these newer agents in extension work have had little or no forestry experience. Considerable time should be spent in training new agricultural workers so that they may better understand the relation of a full forest economy to agriculture and be better equipped to assist with the application of forestry to local conditions and problems. It may also be desirable to hold forestry schools for woodland owners for imparting specific information on forestry practices.
- b. Demonstration Forestry Farms - In the past forestry has been demonstrated on small portions of the farm. Suitable practices were applied, but in many cases the economic importance and relationship to the farming enterprise were not felt in any marked degree. In many communities the time is ripe for the application of woodland management practices to the entire farm woodland acreage and the treatment of all stands according to their silvicultural needs, provided that the farmer's program, markets, and other conditions permit. Some States have been following this procedure, and others have indicated that at least one of these demonstration forestry farms should be established per county. County agents can assist in selecting cooperators interested in practical forest management and in using their woodlands as demonstrations for the benefit of the community. Technical guidance will be provided as needed in initiating and in following up this work.
- c. Utilization of Small-Sized Trees - In many areas all large timber has been cut, as well as much of the young merchantable sizes, leaving a preponderance of younger age-classes, little-used species, and low-grade timber. If utilization progress continues, these may be needed in chemical production and other forms of manufacture for a large range of products. Keeping abreast with developments in the utilization of wood and gearing



the requirements of industry into farm production of smaller size trees on a basis consistent with sound forestry and a fair return afford a real challenge.

- d. Mechanization of Farm Forestry Operation - The war quickened interest in power equipment as a means of maintaining production during a labor shortage. Considerable progress has been made in the development of power equipment, some of which appears satisfactory for farm forestry operations. Thinning and other stand improvement practices will be more readily accepted if some of the drudgery can be taken out of woods work and the cost of production reduced. Power equipment may be one answer to this problem. Demonstration work showing the use of new tools, including power saws and mechanization of woods operations, has been started, and farmers have shown amazing interest. This phase of extension is meeting a definite need and with the availability of suitable equipment can be expected to expand considerably during the current year. Portable sawmills to go from farm to farm to cut lumber for farm housing are another newer project now being developed in several States.
- e. Teaching Aids To Supplement Program - The preparation of Department publications will be carried out in accordance with the needs of the field program. Cooperation with the Forest Service in this work has been satisfactory. Educational materials will be developed by the Forest Service or Extension Service and made available to extension agents. State extension foresters will be encouraged to prepare local forestry materials as needed to promote interest in phases of farm forestry. Brief, well illustrated leaflets giving specific information on how to do a job seem to be of particular interest to farm woodland owners.
- f. Intensive Extension Assistance - To redeem extension responsibilities in farm forestry during the reconversion period will require more intensive work, necessitating additional extension assistance in forestry to carry the program to farm people and to provide the technical guidance necessary for its acceptance and development.
- g. Regional Meetings - Regional meetings of extension foresters with participation by cooperating agencies are needed to discuss subject matter and extension procedure and to clarify policy and administrative matters. Meetings at Forest Service experiment stations would also help to keep subject-matter specialists well informed.

#### 4. Operational Problems and Assistance Needed

- a. It is obvious that in order to give an intensive educational service, as referred to above, a substantial increase in extension forestry personnel will be necessary. For example, some directors have indicated a need for as many as 5 to 15 foresters to the State to serve as county agents in one or more counties. We are not now in a position to suggest the total personnel and financial needs of State extension services. It is understood that the



Extension Organization and Policy Committee has requested Director Watkins, chairman of the Forestry Subcommittee, to canvass the States and submit this information to the Federal Director of Extension.

- b. There is considerable difference in the policies followed by the Forest Service and Extension Service in allotting and off-setting Norris-Doxey funds. It has been recommended that a uniform policy be established by the two administrative agencies.
- c. In any program, conflicts may arise, especially wheretwo Department agencies with similar funds cooperate with the same agencies in the field and when the funds of one agency are used in part for the supervision of the program of the other agency. Under these conditions, confusion may easily result if problems are not kept clarified and a definite cooperative working relationship established. This seems not only desirable but necessary.
- d. What if any should be the cooperative responsibilities of extension foresters here to Norris-Doxey project work conducted by the Forest Service in cooperation with State Extension Services?
- e. As Norris-Doxey project work and extension work in farm forestry are very similar in those States where they are administered by State extension services, it has been suggested that these programs should be brought together and administered as one program both at the State and Federal levels. It is recommended that consideration be given to this suggestion, particularly as it applies to the Department programs.



FORESTRY EXTENSION  
ACTIVITIES AND ACCOMPLISHMENTS FOR 1944  
As Reported by Extension Agents

	<u>Number</u>	<u>Counties reporting work</u>
Number of local leaders assisting in forestry .....	23,192	2,146
Number of farmers assisted this year -		
In reforesting new areas by planting with small trees .....	37,760	1,658
In planting windbreaks or shelterbelts .....	19,403	1,019
In making improved thinnings, weedings, or pruning of forest trees .....	25,758	1,250
With selection cutting .....	31,260	1,224
With production of naval stores .....	4,178	113
With production of maple-sirup products .....	3,720	185
In timber estimating and appraisal .....	18,881	1,157
Number of communities in which marketing of forest products was conducted .....	6,486	828
Number of farmers cooperating this year in pre- vention of forest fires .....	636,015	1,325
4-H forestry projects:		
Total enrollment .....	13,134	..
Number completing projects .....	9,598	..

Other Related Work

Number of farmers assisted this year in -		
Construction of farm buildings .....	62,188	2,149
Remodeling or repairing farm buildings .....	81,406	2,124
Making specific improvements for wildlife .....	43,454	1,337
Number of families assisted this year in -		
Removing fire and accident hazards .....	568,377	1,799
4-H wildlife and nature study:		
Total enrollment .....	30,149	..
Number completing projects .....	23,022	..